

hills adjoining Loktak Lake during November 2000 as part of the Manipur Bush Quail Survey, conducted by the World Pheasant Association, South Asia Office, on behalf of the Indian Bird Conservation Network, Bombay Natural History Society. Though our target species was the Manipur Bush Quail *Perdicula manipurensis*, we also noted other birds found in the survey area, as primary information on birds from these areas are scarce.

While watching birds, a shiny white bird among the foliage caught our attention. On a closer look, we identified it as an albino Red-vented Bulbul *Pycnonotus cafer*. It was moving along with a mixed-species feeding group comprised of Red-vented Bulbuls, Yellow-breasted Greenfinches and Spotted-winged Grosbeaks. The albino bulbul had white plumage, even the flight feathers were glistening white. This we noticed when the bird flew from one branch to another. The bird's head was somewhat pale brownish and it had a scarlet-red vent that was quite conspicuous against its white plumage.

The bird apparently was less agile, while the other members of the mixed species flock were moving restlessly from one branch to another, feeding on insects from within the flowers and *Pinus* cones. It kept to a single cone for the greater part of an hour as we watched and photographed its each move. While the other birds fed on the insects from eight different trees, the albino bulbul restricted itself to a single tree. It also turned out to be somewhat shy. Despite our presence the other birds, even other conspecific individuals, fed on nearby trees, but the albino never came close. It confined itself in thick foliage. This might be attributed

to an adaptive behaviour of keeping itself less conspicuous among the dense foliage, probably giving itself a better chance of escaping from predators. The white colouration would otherwise get noticed quite easily in the open.

Albino Red-vented Bulbuls have been reported twice (Baker 1915; Joshua 1996) from the Indian subcontinent. Joshua (1996) reported the same plumage pattern for the albino Red-vented Bulbul, a pale brown head and red vent.

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REFERENCES

BAKER, E.C.S. (1915): An albino bulbul. *Rec. Indian Mus.* 11: 351-352.

JOSHUA, J. (1996): An albino Red-vented Bulbul *Pycnonotus cafer*. *J. Bombay Nat. Hist. Soc.* 93(3): 586.

22. USE OF LICHENS IN BIRD NEST CONSTRUCTION: OBSERVATIONS FROM BOLAMPATTI RANGE, TAMIL NADU, WESTERN GHATS

Introduction

Birds use lichens for nest building (Ali 1996), camouflage and feeding on small lichenophagous invertebrates which are present below the lichens (Richardson and Young 1977). Though extensive reports on the preferences of birds towards specific lichen species were available from Australia, Europe and North America (Richardson and Young 1977; Tibell and Gibson 1986), such detailed accounts were not available from India. Ali (1996) reported the use of lichens in nest building by several bird species such as flycatchers (*Muscicapa latirostris*, *M. ruficauda*, *Culicicapa ceylonensis* and *Hypothymis*

azurea); sunbirds, babblers, minivets (*Pericrocotus flammeus*, *P. ethologus*, *P. roseus* and *P. cinnamomeus*), and to a lesser extent Black Bulbul (*Hypsipetes madagascariensis*). Considering the intricate relationships between lichens and other organisms, it is felt that the knowledge on use of lichen species by other organisms in India is still superficial and meagre (Krishnamurthy *et al.* 1993; Krishnamurthy *et al.* 1999). This paper enumerates the lichen species observed on a bird's nest.

During our survey in the Bolampatti II range of forests, Coimbatore district, Tamil Nadu (11° 2' - 10° 54' N, 76° 33' - 76° 46' E; Altitude 450-1,500 m), within the Nilgiri Biosphere

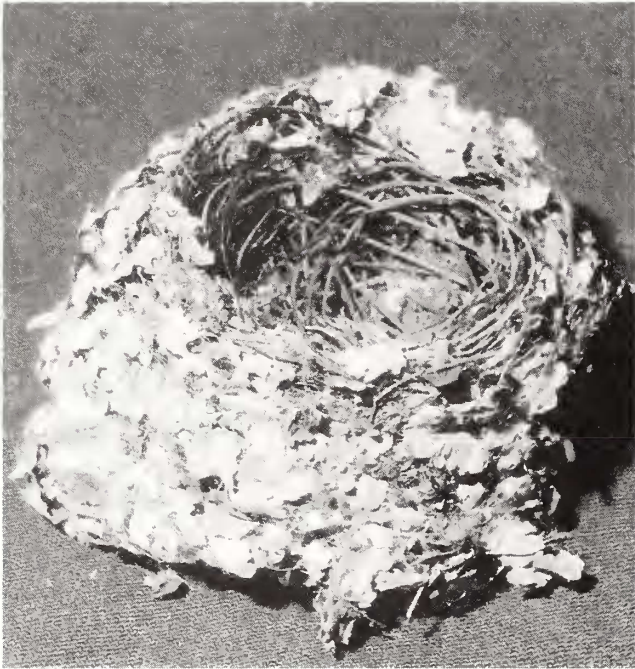


Fig. 1: Lichen covered Bird's nest from the Bolampatti II range of Forests, Western Ghats

Reserve we found a bird's nest (Fig. 1) completely covered with lichens, in the fork of the upper branches, 12 m from the ground, of an *Albizia odoratissima* (L.f.) Benth., within a Mixed Deciduous forest at 800 m above msl.

The cup-shaped nest was made of grass and fibres as described by Ali (1996). It measured 8 cm in diameter, 4.5 cm in height and the bulk of the inner nesting material was composed of a thin rachis of an imparipinnate compound leaf. The rachis was 8.5 cm long with a swollen base, properly bowered to form the nest.

Lichen species were found plastered compactly with cobwebs one above the other on the outer surface of the nest by the bird. These lichens *Bulbothrix tabacina* (Mont. Bosch) Hale, *Parmotrema mesotropum* (Mull. Arg.) Hale and *P. zollingeri* (Hepp.) Hale, were identified using standard literature (Awasthi 1989). No lichens were found within the inner cavity of the nest. *Parmotrema mesotropum* and *P. zollingeri* were used in large quantities to cover the lower lateral surfaces of the nest. The rim of the nest was lined with *Bulbothrix tabacina*. The growth form, lobe shape and size

and colour of all the three lichen species were found to be similar.

Discussion: The presence of lichens on only the outer surface shows that the bird has used lichens to camouflage the nest from predators, and decorate. The golden plovers of St. Lawrence Island in the Bering Sea make their nests from the lichen *Thamnolia vermicularis* s.l. in a site with bright and conspicuous lichens around it, such that it perfectly camouflages the nest; in addition, the bird's colouring matches that of the lichen covered nest, so it is camouflaged when sitting on the nest (Sauer 1962). In this case also, the branch supporting the nest was completely covered by morphologically similar lichens such as *Hypotrachyna awasthi* Hale & Patw, *Parmotrema saccatilobum* (Zahlbr.) Hale and *Rimelia reticulatum* (Taylor) Hale & A. Fletcher.

The Bower Bird *Prionodura newtoniana* in Australia uses *Usnea* sp. and several other bird species use lichens to decorate their nests (Tibell and Gibson 1986; Seaward 1989). Bower Birds court and mate inside the nest and hence decorate it; a few Indian birds also do the same. The bird's selectiveness for specific lichen species has also been reported earlier. The Long-tailed Tit (*Aegithalos caudatus* L.) selectively collects *Evernia prunastri* (L.) Ach. for nest building (Richardson and Young 1977). In this case, the use of lichens could be to decorate and camouflage the nest from predators.

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REFERENCES

- ALI, SÁLIM (1996): The Books of Indian Birds. 12th Edn. Bombay Natural History Society, 354 pp.
- AWASTHI, D.D. (1989): A key to the macro lichens of India and Nepal. *Journal of Hattori Botanical Laboratory* 65: 207-302.
- KRISHNAMURTHY, K.V., G.N. HARIHARAN & JOHN T. KOCHERIL (1993): Mutualism between *Metisa* species (insect) and *Lepraria* species (lichen). *Phytophaga* 5: 97-99.
- KRISHNAMURTHY, K.V., JOHN T. KOCHERIL & M. MOHANASUNDARAM (1999): Lichen - Mite association. Pp. 29-55. *In: Biology of lichens* (Eds: Mukerji, K.G., B.P. Chamola, D.K. Upreti & Rajeev K. Upadhyay). Aravali Books International, New Delhi.
- RICHARDSON, D.H.S. & COLIN M. YOUNG (1977): Lichens and Vertebrates.

- Pp. 121-144. *In*: Lichen Ecology (Ed.: Seaward, M.R.D.). Academic Press, London.
- SAUER, E.G.F. (1962): Ethology and ecology of golden plover on St. Lawrence Island, Bering Sea. *Psychologische Forsch.* 26: 399-470.
- SEAWARD, M.R.D. (1989): Contribution of lichens to ecosystems. Pp. 107-129. *In*: M. Galun, (ed.) CRC Handbook of Lichenology. Vol. II. CRC Press, Florida.
- TIBELL L. & C.J. GIBSON (1986): Bower decoration with *Usnea* species in the Golden Bower Bird. *Lichenologist* 18: 95-96.

23. FIRST RECORD OF *POLYPEDATES LEUCOMYSTAX* (GRAVENHORST 1829) (ANURA: RHACOPHORIDAE) FROM SOUTHERN WEST BENGAL

The Common Indian Tree Frog *Polypedates maculatus* has been reported from all the districts of West Bengal (Mansukhani and Sarkar 1977; Sarkar 1984; Sarkar *et al.* 1992).

However, the Four-lined Tree Frog *Polypedates leucomystax*, which is so common in all the states of northeast India (Dutta 1997), has only been reported from the hilly Darjeeling and Jalpaiguri districts of northern West Bengal (Sarkar *et al.* 1992). It has also been reported from the plains of Bangladesh by Khan (1982).

On June 23, 2002 at 1930 hrs, we collected a male (SVL 58 mm) and a female (SVL 74 mm) *Polypedates leucomystax* from Rajpur (22° 20' N, 88° 35' E) in South 24 Parganas district of southern West Bengal, just 6 km south of Calcutta (= Kolkata). The female was hiding in the leaf axil of a banana plant (*Musa paradisiaca*), about 2 m above the ground, in a garden. The male was calling from a fence near a pool of water, 1.5 m above the ground. The specimens were deposited in the Zoological Survey of India, Calcutta (ZSI A 9603, male; ZSI A 9604, female). These specimens are the first record of the species from the plains of southern West Bengal, and

extend the known range of the species by 500 km to the south.

We noted that the call of *P. maculatus*, which is sympatric, is a distinct *tak-tak-tak* while that of *P. leucomystax* is a sharp and loud *kraawk*. *P. leucomystax* was observed to be quite common in the area.

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REFERENCES

- DUTTA, S.K. (1997): Amphibians of India and Sri Lanka — checklist and bibliography. Odyssey Publishers, Bhubaneswar. Pp. 342.
- KHAN, M.A.R. (1982): Wildlife of Bangladesh — a checklist. University of Dhaka, Dhaka. Pp. 174.
- MANSUKHANI, M.R. & A.K. SARKAR (1977): Amphibians of Midnapore district, West Bengal. *Newsl. Zool. Surv. India* 3(4): 156-157.
- SARKAR, A.K. (1984): Taxonomic and ecological studies on the amphibians of Calcutta and its environs. *Rec. zool. Surv. India* 81(3-4): 215-236.
- SARKAR, A.K., M.L. BISWAS & S. RAY (1992): Amphibia — In Fauna of West Bengal. *Zool. Surv. India, State Fauna Series* 3(2): 67-100.

24. A NOTE ON *BARILIUS BAKERI* (CYPRINIDAE: DANIONINAE) FROM KARNATAKA WITH REMARKS ON THE STATUS OF *OPSARIUS MALABARICUS* JERDON

Introduction

Day (1875-78) described 14 species of *Barilius*, grouping them on the basis of presence or absence of barbels. Jayaram (1999) listed 18 species of *Barilius*, including one subspecies, from the Indian region. Recently, three more species were described by Arunkumar and Singh (2000); Vishwanath *et al.* (2002) and Selim and Vishwanath (2002) from Manipur, bringing the current total to 21.

From Karnataka, Chandrasekhariah *et al.* (2000) list 6 species, with their distribution in the different east and west

flowing drainages. Among the east flowing rivers, namely Godavari, Krishna and Cauvery, they list one species from Godavari — *B. bendelisis*, three species from Krishna — *B. barila*, *B. barna* and *B. bendelisis* and one species from Cauvery — *B. gatensis*. From the west flowing rivers, they report 3 species — *B. bakeri*, *B. bendelisis* and *B. canarensis*. Earlier Jayaram *et al.* (1982), reporting on the fishes of Cauvery, collected and recorded another species of *Barilius* from Karnataka, *B. vagra vagra*. There has been no report of *B. vagra vagra* subsequently from Cauvery, and furthermore,